Afloat Hearing Conservation Program (HCP) Management Training Guide

Navy Medical Surveillance Working Group

Last Updated DEC 2012

Purpose

- The purpose of this guide is to help afloat medical, safety, and command leadership personnel manage an effective HCP by
  - Understanding the importance and basic requirements of the HCP
  - Familiarizing themselves with their respective roles and responsibilities
  - Understanding an effective program process via flowchart and narrative descriptions
- This presentation is built from guidance contained in **Chapter B4 of OPNAVINST 5100.19E**

Background

- Hearing loss is one of the most pervasive occupational health problems in the military
- Noise-induced hearing loss can be permanent and must be identified early
- Risk of hearing loss can be minimized by managing a comprehensive, effective HCP
- An effective HCP cannot be maintained without full engagement of ALL stakeholders

Hearing Conservation Program

- The HCP is intended to preserve the hearing of our Sailors and Marines
- Proper ability to hear contributes to
  - Good communications: this could save lives in combat
  - Absence or reduction of tinnitus (ringing in the ears)
  - Reduced stress level
  - Improved morale and higher efficiency
  - Being able to enjoy you favorite music and hear your loved ones later in life

Program Stakeholders
(click on links)

- Commanding Officer
- Afloat Medical Department Rep
- Safety Officer
- Supervisors
- Division Officers
- All Hands
- Occupational Health Support Personnel

Commanding Officer

- Ensure that HCP is established and maintained within the command

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Go to Process Flowchart

Afloat Medical Department Rep

- Coordinate with Division Officers to ID and maintain a current roster of personnel routinely exposed to hazardous noise using the command Industrial Hygiene (IH) survey as a guide
- Conduct hearing conservation training for all hands during INDOC and annually
- Consult the IH survey to determine the type of hearing protection required for personnel
- Maintain adequate stock of non-disposable hearing protection
- Schedule personnel in HC program for audiometric testing and ensure that results are entered into Defense Occupational and Environmental Readiness System-Hearing Conservation (DOERS-HC)
- Ensure that personnel requiring hearing re-tests are excluded from noise hazardous areas for at least 14 hours prior to the test
- Ensure annual certification of onboard audio-booths (when applicable)
- Report to the Safety Officer all Permanent Threshold Shifts (PTS) and assist reporting as required by OPNAVINST 5102.1 (series)
- Consult with the supporting IH or audiologist when needed

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Command Safety Officer

- Request Industrial Hygiene or audiologist support to obtain noise measurements
- Maintain records of noise hazardous areas and equipment and ensure they are labeled
- Ensure all Permanent Threshold Shifts (PTS) are reported (to them) by medical departments
- Ensure that PTS are reported via the Web Enabled Safety System (WESS) in accordance with OPNAVINST 5102.1 (series)

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Supervisors

- Review IH survey sections pertinent to those areas they have cognizance over
- Identify specific personnel routinely working in those areas designated as noise hazardous and forward names to the Medical Department Representative
- Ensure personnel identified for enrollment in the HCP perform the following
  - Complete initial and annual training on program and hearing protection
  - Undergo audiometric testing when needed, to include all follow-up exams
  - Ensure personnel working in hazardous noise areas have, and properly use, hearing protection

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Division Officers

- Coordinate with Supervisors and Medical Department Rep to identify personnel routinely exposed to hazardous noise
- Ensure personnel working in hazardous noise areas have, and properly use, hearing protection
- Ensure that noise hazardous spaces and equipment is properly posted and labeled
- Ensure all personnel required to wear hearing protection are trained in its use and maintenance
- Ensure personnel report for scheduled audiometric testing and training
- Ensure that personnel who require re-testing are excluded from hazardous noise areas for at least 14 hours prior to re-test

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All Hands

- Always comply with hazardous noise warning signage
- Properly wear assigned hearing protection devices (single or double when required)
- Undergo hearing testing when required, to include all follow-up testing
- Notify Chain of Command of any follow-up hearing tests required

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Occupational Health Personnel

- Conduct audiometric testing on personnel identified by the command as requiring it
- Update appropriate medical records systems with audiometric testing results
- Provide written notification of exam completion and any required follow-up testing to individual member
- Provide written notification of identified Permanent Threshold Shifts (PTS) to member’s Commanding Officer

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Go to Process Flowchart

Afloat Hearing Conservation Medical Surveillance Flowchart

Start

Click on Hyperlinks in Each Box

MDR/SO* review hearing conservation program recommendations in IH survey

Forward recommendations to each Division Officer

Division Officers forward recommendations to each W/C Supervisor

W/C Supervisor identify personnel meeting criteria for enrollment described in IH survey

W/C Supervisor forward names of personnel meeting criteria to Division Officer and LCPO

Division Officers forward names of W/C personnel to MDR and SO

*MDR = Medical Department Rep
*SO = Safety Officer

MDR/SO create command tracker and record W/C personnel names

MDR schedule W/C personnel for audiogram

W/C personnel complete audiogram and inform chain of command when complete

STS? — No → Inform chain of command when complete and return to duty

STS? — Yes → Schedule 1st follow-up audiogram

STS? — No → Inform chain of command when complete

STS? — Yes → Schedule 2nd follow-up audiogram

STS? — Yes → Schedule follow-up with audiologist

STS? — No → Inform chain of command when complete and return to duty

PTS? — No → Inform chain of command when exam complete and return to duty

PTS? — Yes → Reset baseline audiogram

SO report PTS to Naval Safety Center

MDR consults with audiologist to determine recommendation for removal from hazardous noise

Command reports audiogram compliance rate for annual safety self-assessment

This program management model was developed to illustrate an effectively run program with full stakeholder involvement

Command Industrial Hygiene (IH) Survey

- Is the primary source for information on which personnel are recommended for enrollment in the hearing conservation program
  - Copies can be obtained from supporting Medical Treatment Facility or Navy Environmental and Preventive Medicine Unit (NEPMU)
- The IH survey does not name specific people recommended for enrollment in program
- Recommendations are based on actual or expected noise exposures measured in
  - Each work space/shop
  - During the performance of specified work tasks (ex. Chipping, grinding, etc.)
- BUMED Industrial Hygiene personnel periodically update each command's IH survey
  - Ship surveys are updated every 2 years

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Medical Surveillance Determination

- The IH survey is the primary resource for exposure-based medical surveillance recommendations. Examples include:
  - Hearing Conservation (Noise)
  - Isocyanates
  - Cadmium, Chromium
  - Laser
  - Metal fumes
  - Asbestos
- Most non-exposure based (Specialty) medical surveillance requirements are generally described in other references. Some examples of these exams include:
  - Aviation (aviators, air crew, flight deck personnel, etc.)
  - Healthcare Worker
  - Food Service Handler
  - Forklift Driver
  - Barber
  - Firefighter
  - Sewage/Wastewater Worker (CHT)

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Forward IH Survey Recommendations to Division Officers

- MDR or Safety
  - Should forward hearing conservation program recommendations to Division Officers
  - Recommendations based on IH Survey

Example of IH survey medical surveillance recommendations

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Forward IH Survey Recommendations

- MDR or Safety Officer
  - Forward recommendations for each Work Center through each Departmental Chain of Command
    - Division Officers have overall responsibility for identifying specific personnel for each program
    - Work Center Supervisors are essential for compiling list of specific personnel for Division Officers

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Example of Industrial Hygiene Medical Surveillance Recommendations

DIVISION	WORKCENTER	WORK TASK	MEDICAL SURVIELLANCE PROGRAM
G1	All	Ordnance safety checks during flight operations, power tool operation, JP-5 or diesel powered forklifts	*NOISE (503)*
G2	All	Firing of 40mm battery, firing of 50 caliber gun, firing of small arms, supervising small arms qualifications	*NOISE (503)*
G3	All	Operating weapons elevators and hoists	*NOISE (503)*
G4	All	Working in machine or pump rooms, operating weapons elevators	*NOISE (503)*
		Interior brush and roller painting with two part epoxy and/or enamel paints/primers	*RESPIRATOR USER CERTIFICATION (716)*
G5	All	Entering flight deck during flight operations	*NOISE (503)*
		Interior brush and roller painting with two part epoxy and/or enamel paints/primers	*RESPIRATOR USER CERTIFICATION (716)*
Security	Security	Performing patrols throughout the ship. Entering the flight deck during flight operations for such special evolutions such as air shows. Performing gun shoots	*NOISE (503)*
Security	Security and Brig	Handling evidence contaminated with human body fluids	*BLOOD AND BODY FLUIDS (178)*

Work Center Supervisor should ID specific personnel who work in each Work Center and forward names up Chain of Command

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Identifying Personnel

- Work Center Supervisors are essential in providing accurate list of specific personnel to Division Officer
  - Identify personnel by cross-checking against IH survey recommendations
  - ID personnel who routinely perform listed work tasks or routinely work in noise hazardous areas
  - Route personnel names through Chain of Command

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Forward Names Up Chain of Command

- Work Center Supervisors
  - Forward specific names up Chain of Command
  - Chain of Command submit names to MDR/Safety for enrollment, scheduling, tracking
    - Work Center Supes should update names as personnel rotate
    - Re-forward new roster to MDR/SO periodically through chain of command

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Forward Names to MDR/SO

- Division Officers and LCPOs should scrub personnel list received from WCS
  - Good idea to maintain Divisional tracker
  - Update regularly
    - Easier to keep regularly updated than to try to update after months of neglect

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Command Tracker

- Can take any form
  - SNAP Automated Medical System (SAMS)
  - Theatre Medical Information Program (TMIP)
  - Enterprise Safety Applications Management System (ESAMS)
  - Medical Readiness Reporting System (MRRS)
  - Other locally developed trackers (Excel, Access, etc.)
    - Name, Department/Division/WC
    - Exam date, follow-up exam date(s)
    - If STS or PTS identified
    - ***Example Local Tracker***

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Example Local Tracker

Department	Division	Last Name	First Name	Rank	Program	Last Exam	STS/PTS?	Next Exam Due	Next Exam Type
Air	V1	Taylor	Dan	LT	Hearing	11/01/11	No	10/31/12	Annual
	V1	Blue	Benjamin	AN	Hearing	10/15/11	No	10/14/12	Annual
	V2	Cassidy	Butch	ABE2	Hearing	01/10/12	STS	01/20/12	2nd Follow-up
Engineering	A	Dufresne	Andy	MM3	Hearing	02/01/11	No	01/31/12	Annual **(OVERDUE)**
	DC	Baggins	Bilbo	DC1	Hearing	08/16/10	PTS	08/15/11	Annual **(OVERDUE)**
	DC	Stevens	Randall	MMC	Asbestos	05/02/07	N/A	ASAP	**Periodic (OVERDUE)**
	E	Munney	William	ET2	Hearing	02/12/12	No	02/11/13	Annual
	E	Childers	Karl	ET3	Hearing	Baseline not yet complete	N/A	ASAP	Baseline **(OVERDUE)**
	E	Hargraves	Doyle	ET1	Hearing	02/29/12	STS	03/02/12	1st Follow Up
	E	McCray	Augustus	ET2	Hearing	02/10/11	No	02/09/12	Annual **(OVERDUE)**
	R	Call	Woodrow	MR1	Hearing	02/25/12	STS	Last exam was 2nd Follow Up	Refer to audiologist

Total Number of Personnel in Program	Number of Personnel with Current Audiogram	% Compliance
11	**6**	**54.5%**

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Audiograms

- Three main types
  - Baseline (DD2215)
    - All military members
    - All DoN Civilians who are enrolled in the Hearing Conservation Program
  - Periodic (DD2216)
    - Generally performed annually for military and civilian personnel enrolled in the hearing conservation program
    - Other (ex. Flight deck crew, aviators, etc.) also receive annually
    - All USMC military personnel will receive annual audiogram, per MARADMIN 010/12 (061313Z Jan 12)
  - Termination
    - All military personnel must have before leaving service
    - All DoD civilians enrolled in hearing conservation program must have before leaving government employment or when removed from Hearing Conservation Program

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Informing the Chain of Command

- Physician or medical provider written opinion must be given to member
- Member must bring written opinion to supervisor
- Informing Chain of Command is Essential
  - Supervisors, CPOs, Division Officers, and Department Heads must be kept informed
    - Follow-up exam needed?
    - “Significant Threshold Shift” (STS) identified?
    - “Permanent Threshold Shift” (PTS) identified?
    - Imperative they know whether a problem needing follow-up was identified
  - Division Officers and Safety Officers must work together to identify trends where STS and PTS occur

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Identifying Trends and Causal Factors

- Safety Officers/Managers and Chain of Command must always ask "Why did hearing loss STS/PTS occur?"
  - Need to ID causal factors and address them. Hearing loss can be **PERMANENT**!!
    - Are Supervisors enforcing wear of earplugs and/or earmuffs?
    - Are personnel trained on the hazards of noise and how to properly insert earplugs?
    - Can the noise generation be reduced?
    - Can the exposure be lessened by reduced "stay" times in the noise hazardous area?
    - Has new noise-producing equipment been installed which increases noise exposure?
    - Have other personnel in same area also experienced STS or PTS?
    - Could hearing loss be associated with non-work activities?
      - *High volumes on MP3 player*
      - *Recreational gun shoots*
      - *Motorcycle noise exposure*
- Call supporting BUMED Industrial Hygienist or Audiologist for assistance. They are there to help you!

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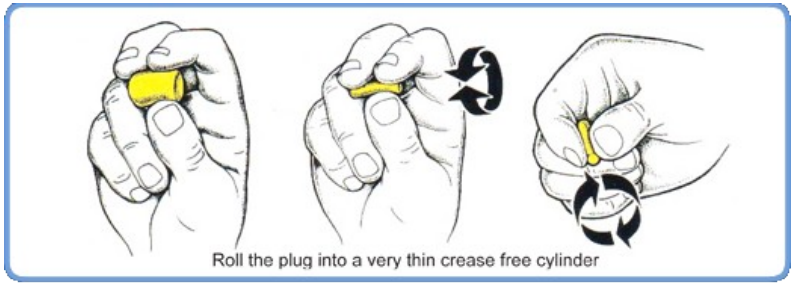
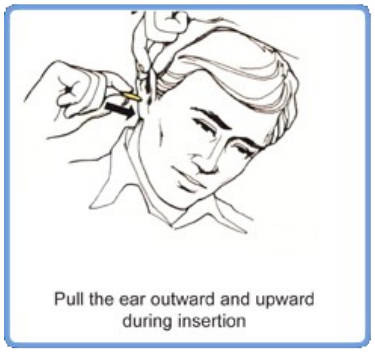
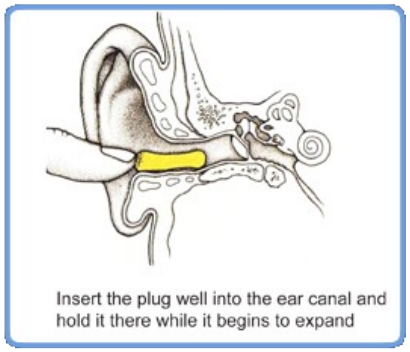
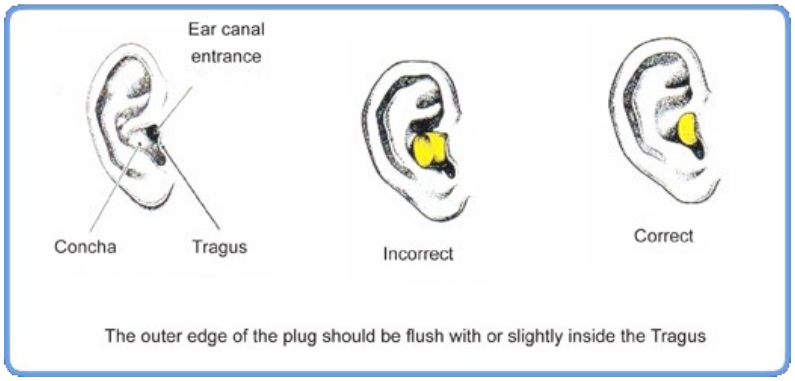
Proper Earplug Wear

Proper earplug insertion is <u>ESSENTIAL</u>!!

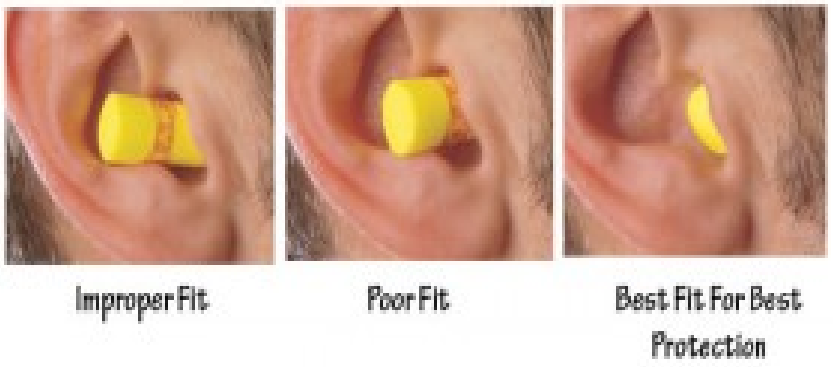








A properly inserted earplug is almost invisible.



Unless it's properly inserted, an earplug will give you almost <u>zero</u> noise attenuation.

Click here for an illustration.

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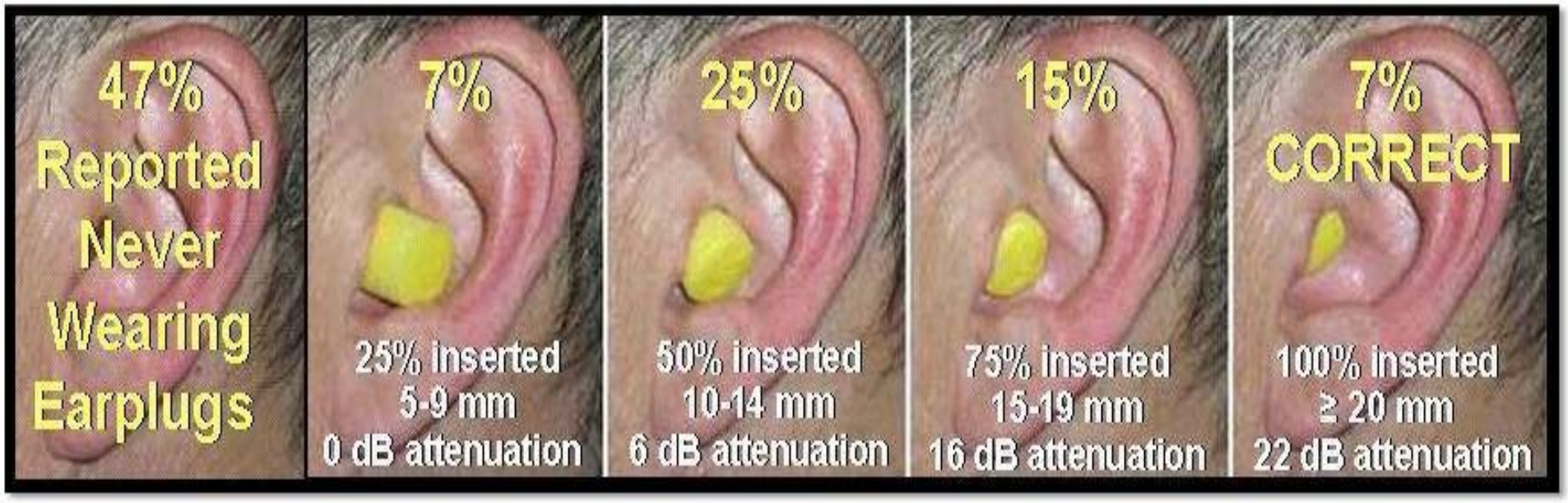

NAVAIR 14MAR0

This photo illustrates a real-world 2006 survey of personnel working in noise hazardous areas.

47% of personnel didn't wear earplugs when they were supposed to and only 7% inserted them deeply enough.

Note the poor noise attenuation (basically **ZERO**)when the plugs weren't inserted deeply enough.

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Train your personnel!!

STS

- “Significant Threshold Shift”
  - Significant change in audiogram when compared to baseline audiogram

- When an STS is identified
  - Additional monitoring hearing tests shall be performed to determine if the threshold shift is temporary or permanent

    - The member's division officer or MDR should be informed of the time and place for follow-up testing

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PTS

- “Permanent Threshold Shift”
  - A “significant threshold shift” (STS) will be determined permanent by an audiologist or appropriately trained physician
  - Individuals will be informed in writing within 21 days of any PTS which results in deteriorated hearing
  - If a PTS is a result of exposure to hazardous noise levels
    - The hearing loss shall be reported to the safety officer and department head by memo
    - Safety and DH must investigate to determine if PTS resulted from an ineffective hearing conservation program

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Follow Up Audiogram #1

- If the annual audiogram shows an STS
  - Individual must be re-tested following at least 14 hours of exclusion from noise levels in excess of 80 dB(A)
  - The individual can't just be given hearing protection (plugs, muffs) and continue to work in the hazardous noise area

- If the first follow-up audiogram verifies an STS, then a possible conductive or mechanical basis for the shift must be ruled out before proceeding with follow-up
  - Medical provider looks to see if some other reason may have caused the STS (earwax, fluid build-up, etc.)

- If tests are negative
  - Follow Up Audiogram #2 is performed to see if STS has resolved itself

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Follow Up Audiogram #2

- If the 2nd follow-up shows STS is no longer an issue then personnel shall
  - Have their hearing protective devices refitted
  - Be re-trained in the proper use of hearing protective devices
  - Be returned to duty

- If the 2nd follow-up continues to show the STS
  - The health care provider will refer the individual for consultation with an audiologist

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Schedule Follow Up with Audiologist

- The audiologist will perform special tests to determine
  - Whether hearing loss is noise-induced
  - Degree of hearing loss
  - Whether hearing loss is temporary or permanent
  - Whether individual is recommended for removal from hazardous noise area

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Reset Baseline Audiogram

- The audiologist may elect to establish a new baseline audiogram for future hearing level comparisons.

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Removal from Hazardous Noise Area

- Any individual who has
  - Significant hearing loss in both ears

OR

  - Has their baseline audiogram re-established three times

Will not be assigned to duties involving exposure to hazardous noise until evaluated and waived by an audiologist, otologist, or occupational medicine physician.

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Reporting PTS

- OPNAVINST 5102.1D
  - Permanent Threshold Shifts can be a reportable occupational injury
    - MDR and/or Safety consult with Audiologist to determine whether PTS meets the reporting criteria
  - Command Safety Officer report to Naval Safety Center
    - Web Enabled Safety System (WESS) http://safetycenter.navy.mil/
    - Naval message if WESS unavailable
  - Complete report within 30 days of PTS identification
  - Don’t forget to investigate for causal factors

Always ask “Why did this happen?”

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Annual Safety Self-Assessment

- See NAVADMIN 048-10 (121425Z FEB 10)
- Performed annually (by 31 Dec) by each command
- Assesses effectiveness of command safety program
  - Identifies strengths, weaknesses, priorities for program improvement
  - Generates “Top 5 Concerns” which must be routed through Chain of Command
  - Reports status of the command’s medical surveillance program (including audiograms)
  - Recommend using as opportunity to self-assess effectiveness of Hearing Conservation Program and compliance

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Calculating Compliance Rate

- Number of personnel with current audiograms divided by number of personnel enrolled in hearing conservation program

Audiogram compliance rate =

$$\frac{\text{\# personnel with current audiogram}}{\text{\# of personnel enrolled in program}} \times 100$$

- ***The Medical Surveillance Exam Completion Report automatically calculates the audiogram completion rate (see link below)***

HTTP://WWW.PUBLIC.NAVY.MIL/NAVSAFECEN/PAGES/OSH/MEDSURV.ASPX

Note: ESAMS and MRRS (see "Command Tracker" slide) also can provide a quick reference audiogram compliance rate

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For Further Information

- Contact your local supporting Industrial Hygienist, Industrial Hygiene Officer, or Audiologist
- Naval Safety Center
- Navy Marine Corps Public Health Center

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